

Claims 13-20 have been allowed and claims 2-9, 11 and 12 are merely objected to as being dependent upon a rejected base claim. The only claim rejections relate to claims 1 and 10, which the Examiner has rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,260,675 ("Muhlenkamp"). Applicants respectfully traverse these rejections for the following reasons.

Independent claim 1 recites a piston assembly for a magneto-rheological fluid damper comprising, among other things, a piston rod having an axial bore therethrough, a sealing member for preventing the penetration of fluid into the bore, and a support member located between the sealing member and an opening into the bore. As would be apparent to one of skill in the art, in order to perform the specified function of preventing penetration of fluid into the bore the claimed sealing member must be located at least partially between the bore in the piston rod and the point at which fluid leaks between the piston core and the distal end of the piston rod. This conclusion is supported by the specification as filed and specifically Fig. 2. The structure in Muhlenkamp identified by the Examiner as corresponding to the claimed sealing member, however, does not satisfy this implicit requirement.

According to the written description at page 4 of the application, the distal end 24 of the piston rod 14 may be coupled to the piston core 12 by, for example, a press fit operation. Because the press fit may not be fluid-tight, pressurized fluid might leak between the piston rod 14 and piston core 12, around the distal end 24 of the piston rod 14, and into the bore 16. Therefore, a sealing member 20 is provided adjacent to the distal end of the piston rod 14 so as to stop fluid that passes around the distal end 24 of the piston rod 14, between the piston rod 14 and the piston core 12, from penetrating *into the bore 16 of the piston rod 14*.

According to the Examiner, “Muhlenkamp discloses a piston assembly for a magneto-rheological fluid damper having a piston rod (20) with axial bore, . . . a sealing member (38) for preventing fluid penetration into the piston rod bore, and a support member (unnumbered conical seal portion to the right of ‘38’ in Figs. 2 and 3).” Applicants respectfully disagree with the Examiner’s characterization of Muhlenkamp. Reference number 38 of Muhlenkamp identifies a counter bore formed in the piston core 22 of Fig. 2, not a seal member. *See* col. 4, lines 18-19. Reference number 36, however, as seen in Fig. 2 of Muhlenkamp, refers to two sealing members or two portions of the same sealing member. Specifically, Muhlenkamp provides “[a] seal member 36 is positioned at one end in a counter bore 38 formed in piston core 22. The opposite end of seal member 36 is frusto-conically shaped and positioned in a complementary shaped recess formed in rod 20 for holding the electrical connectors and preventing leakage of fluid into bore 30 of rod 20.” *See* col. 4, lines 18-23 (emphasis added). Thus, while Fig. 2 appears to show two sealing members – one in counter bore 38 and one in bore 30 of rod 20 (see change in cross-hatching), the written description, as quoted above, suggest a single sealing member 36.

Contrary to the Examiner’s contention, the sealing member (or portion of sealing member) 36 located in counter bore 38 of the piston core 22 does not correspond to the claimed sealing member for preventing the penetration of fluid into *the bore of the piston rod*. Specifically, the sealing member (or portion of sealing member) 36 located in the counter bore 38 is not in a position to perform the claimed function. Rather, the sealing member located in the counter bore 38 is in position to prevent the penetration of fluid into the central bore 34 *in the piston core*. That is not to say, however, that no structure in Muhlenkamp corresponds to the claimed sealing member.

Applicants admit in paragraph [0003] of the application, as filed, that Muhlenkamp includes a sealing member. Moreover, as previously indicated, Muhlenkamp teaches a frusto-conically shaped seal member positioned in a complementary recess formed in rod 20 for preventing leakage of fluid into bore 30 of rod 20. *See* col. 4, lines 18-23. Therefore, the “unnumbered conical seal portion to the right of ‘38’ in Figs. 2 and 3,” corresponds to the claimed sealing member – not the support member as argued by the Examiner. In fact, Muhlenkamp lacks any structure corresponding to the claimed support member, which according to claim 1 is “located between the sealing member and an opening into the bore.” For at least these reasons, Applicants respectfully submit that claim 1 is patentable over Muhlenkamp.


Independent claim 10 recites “a means for sealing the bore to prevent fluid from penetrating into the bore” and “a means for supporting the sealing means to prevent the sealing means from being forced into the bore of the piston rod.” According to the specification, the claimed means for supporting the sealing means may be a support member 22 like the sleeve shown in Fig. 2. As detailed above with respect to claim 1, Muhlenkamp lacks any structure corresponding to the claimed support member or means for supporting the sealing means. Thus, for at least this reason, Applicants respectfully submit that claim 10 is also patentable over Muhlenkamp.

The Examiner has objected to claims 2-9, 11 and 12 as being dependent upon claims 1 and 10, which the Examiner previously rejected. In view of the preceding arguments, Applicants respectfully submit that claims 1 and 10 are patentable and that the objection to claims 2-9, 11 and 12 should be removed.

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Response

In light of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case. The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or to credit any overpayment to Deposit Account 20-0809. Prompt and favorable examination is requested.

Respectfully submitted,

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